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Patentansprüche

1. A fixture (1) for supporting a workpiece in a machine tool (2), in particular a crankshaft in an inclined-bed turning and milling machine, by means of two support elements (14, 15) arranged at a lateral distance from one another and radially moveable in relation to the workpiece (3), the support elements (14, 15) being held in a housing (11), having the workpiece (3) lying on them and with their ends facing away from the workpiece (3) being formed as two levers (16, 17) in a swiveling mounting in the housing (11), in which case the levers (16, 17) are driveably connected to one another by a threaded spindle (31), with the threaded spindle (31) displaying counter-rotating thread sections (32, 33) in its areas corresponding to the two support elements (14, 15), with each of the threaded sections (32, 33) engaging in a sliding block (37 or 38) and held in a rotating mounting in the holes (35, 36) worked into the support elements (14, 15) at an angle perpendicular to the threaded spindle (31).

characterized in that,

the threaded spindle (31) is provided with a device (51) for locking it in the operating position to which it is set.

2. The fixture in accordance with Claim 1,

characterized in that,

5 the locking device (51) for the threaded spindle (31) can consist of an adjusting element (52) connected to the housing (11) of the fixture (1), through which the threaded spindle (31) is passed, and one or two expanding wedges (57, 58) which interact with the threaded spindle (31) and the adjusting element (52).

- 10 3. The fixture in accordance with Claim 1 or 2,

characterized in that,

15 the threaded spindle (31) is provided with an abutting piece (54) arranged inside the adjusting element (52) and on the threaded spindle (31), for example in the form of a ring, between which ring and the adjusting element (52) the expanding wedges (57, 58) are clamped, in a preferred embodiment with the help of servo devices (59, 60).

- 20 4. The fixture in accordance with one or more of Claims 1 to 3,

characterized in that,

25 to provide for automatic adjustment for any misalignment, the adjusting element (52) of the locking device (51) should be able to swivel and be adjustable in height in relation to the threaded spindle (51) in the housing (11) of the fixture (1).

- 30 5. The fixture in accordance with Claim 4,

characterized in that,

a spigot (63, 64) is mounted directly onto the housing (11) or onto each of the

sliding blocks (61, 62) inserted into the housing (11), each of which engage in the holes (65, 66) worked into the adjusting element (52).

6. The fixture in accordance with Claim 4 or 5,

characterized in that,

in order to allow the height of the adjusting element (52) to be adjusted there should be a sliding block (61, 62) inserted into each of the grooves (43, 44) worked into the housing (11) and connected to the adjusting element (52).

7. The fixture in accordance with one or more of Claims 1 to 6,

characterized in that,

the locking device (51) is adjustable in the axial direction of the threaded spindle (31) so that the centering point of the workpiece (3) can be adjusted in the axial direction of the threaded spindle (31).

8. The fixture in accordance with Claim 7,

characterized in that,

the locking device (51) is mounted in a slide (71) using a cardan-type arrangement with the sliding blocks (61, 62), with the slide (71) being adjustable in the grooves (72, 73) worked into the plates (12, 13) of the housing (11) of the fixture (1) by means of a tension element which, in a preferred embodiment, is configured as a rotating spindle (74).

9. The fixture in accordance with one or more of Claims 1 to 8,

characterized in that,

the threaded spindle (31) is located approximately in the center between the

bearing pins (18, 19) of the support elements (14, 15) and the contact rollers (22, 23) for the workpiece (3) provided on the support elements (14, 15).

10. The fixture in accordance with one or more of Claims 1 to 9,

characterized in that,

the housing (11) comprises two plates (12, 13) kept at a distance from one another, between which the support elements (14, 15) and their bearing pins (18, 19) are arranged.

11. The fixture in accordance with one or more of Claims 1 to 10,

characterized in that,

a space (39, 40 or 41, 42) is provided in the support elements (14, 15) on both sides of the sliding blocks (37, 38) for accommodating the threaded spindle (31).

12. The fixture in accordance with one or more of Claims 1 to 11,

characterized in that,

the fixture (1) is provided with a support lever (24) in a pivoting bearing in the housing (11) and preferably actuated using a servo device (26), with the support lever (24) acting on the side of the workpiece (3) facing away from the support elements (14, 15).

13. The fixture in accordance with one or more of Claims 1 to 12,

characterized in that,

the support elements (14, 15) are provided with exchangeable adapters (30)

mounted on them.

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